

BEST AVAILABLE COPY

ATTORNEY DOCKET NO. 19232.0011U1

APPLICATION NO. 10/650,240

Page 2 of 3

Listing of Claims

1. (previously presented) A crystal-growing furnace, in particular a vertical Bridgman or vertical gradient freeze crystal-growing furnace having a jacket heater surrounding the crucible coaxially and having a device for regulating the heat output of the jacket heater, characterized in that a hollow cylindrical body made of a heat conducting material is present as a heat bridge between the crucible and the jacket heater; at least two thermocouples which are offset radially relative to one another are provided in a horizontal plane intersecting the jacket heater and the crucible for measuring a radial temperature difference, the heat output of the jacket heater being regulated as a function of the temperature difference.
2. (previously presented) The crystal-growing furnace according to Claim 1, characterized in that at least two jacket heaters are provided and are arranged such that they are spaced a distance apart in the axial direction, the heat output of each being adjustable independently of the other, and a pair of thermocouples being provided for each jacket heater.
3. (previously presented) The crystal-growing furnace according to Claim 1, characterized in that the hollow cylindrical body has at least two boreholes in which two thermocouples are provided, radially offset relative to one another, permitting measurement of a radial temperature difference in the hollow cylindrical body, and an electric variable representing this radial temperature difference in the hollow cylindrical body is sent to a regulating device for the heat output of the jacket heater.
4. (previously presented) The crystal-growing furnace according to Claim 3, characterized in that the borehole for the thermocouple situated on the outside radially is positioned in the radial direction, and the borehole for the thermocouple, which is situated on the inside radially, is positioned in the axial direction.
5. (previously presented) The crystal-growing furnace according to Claim 3, characterized in that the thermocouples of a pair of thermocouples are connected electrically back to back, so that the differential voltage forms a measure of the temperature difference.
6. (canceled)

280575